=> d his

(FILE 'HOME' ENTERED AT 18:44:36 ON 21 NOV 2007)
FILE 'CA' ENTERED AT 18:44:49 ON 21 NOV 2007
L1 23370 S (SPECTRAL OR SPECTRUM OR INTENSITY OR FLUORESCEN?)(4A)(UNIFORMIT? OR NONUNIFORMIT? OR VARIABILIT? OR VARIATION OR DEVIAT? OR IRREGULAR? OR INCONSISTENT?)
FILE 'REGISTRY' ENTERED AT 18:52:43 ON 21 NOV 2007
L2 15 S (FAM OR SYBR GREEN OR VIC OR JOE OR TAMRA OR NED OR CY-3 OR TEXAS RED OR CY-5 OR ROX)/CN
FILE 'CA' ENTERED AT 18:55:08 ON 21 NOV 2007
L3 107 S L1 AND(MULTIWELL OR MICROTIT? OR MICROPLATE OR COMBINATORIAL OR PCR OR(WELL OR MICRO)(1W)(PLATE OR TRAY))
L4 657 S L1(5A)(CALIBRAT? OR COMPENSAT? OR ESTIMAT? OR EVALUAT? OR REDUC? OR CORRECT?)
L5 90 S L1(5A)SIMULAT?
L6 743 S L4,L5
L7 5 S L6 AND(FAM OR SYBR GREEN OR VIC OR JOE OR TAMRA OR NED OR CY-3 OR TEXAS RED OR CY-5 OR ROX OR L2)
L8 270 S L6 AND (FILTER? OR OPTIC? OR ALGORITHM OR EQUATION OR RATIO?)
L9 376 S L3,L7-8
L10 264 S L9 AND PY<2004
L11 40 S L9 AND PATENT/DT
FILE 'BIOSIS' ENTERED AT 19:26:56 ON 21 NOV 2007
L12 118 S L10
FILE 'MEDLINE' ENTERED AT 19:27:31 ON 21 NOV 2007
L13 124 S L10
FILE 'CA, BIOSIS, MEDLINE' ENTERED AT 19:28:33 ON 21 NOV 2007
L14 394 DUP REM L10 L11 L12 L13 (152 DUPLICATES REMOVED)

=> d bib,ab,kwic l14 1-394

L14 ANSWER 15 OF 394 CA COPYRIGHT 2007 ACS on STN
AN 140:213499 CA
TI Reading of fluorescent arrays
IN Montagu, Jean I.; Webb, Robert H.
PA Clinical Microarrays, Inc., USA
SO PCT Int. Appl., 42 pp.

PI	WO 2004017374	A2	20040226	WO 2003-US25702	20030818
	US 2006127946	A1	20060615	US 2005-524615	20050216
PRAI	US 2002-404237P	P	20020816		
	US 2002-430299P	P	20021202		
	US 2003-476512P	P	20030606		

AB Reading of fluorescent arrays in clin. settings is made possible by a reader constructed to employ dark field illumination of the array, and mapping an image of the array onto a solid state sensor array with image dimensions (D) of the same order magnitude as the dimensions of the fluorescent array, preferably with redn. of image. High **intensity** illumination is employed, non **uniformities** of which being **compensated** by normalization employing intensity calibration features in the array itself, that are sensed during imaging of the array. Preferably high intensity light emitting diodes such as used in traffic lights, are employed for excitation of the array, preferably the excitation being introduced to the array via a solid internally reflecting homogenizer.

Intermediate depth of field collection and imaging **optics** enable substantial collection of light, with NA in the range of 0.30 to 0.60, preferably in the range of 0.4 to 0.55. The resultant relatively large depth of field is in some advantageous cases compensated by absorbing light that tends to travel beyond the spots being imaged and would otherwise create noise fluorescence, the absorption produced e.g., by an opaque metal oxide coating that is interposed between a substrate, preferably an ultra-thin substrate, on which the array lies, and the much thicker glass or other rigid support. For clin. purposes the arrays comprise fewer than 1000 spots, as is appropriate for protein, one example being an array of fewer than 500 spots. Relatively large spot sizes are employed, i.e. of the order of at least 80 or 100 μ diam. spots or preferably larger, 150 or 300 μ spots. Resoln. of such spots to at least 50 pixels on the solid state detector array enables suitable binning and other manipulations leading to highly accurate results. Novel methods of assays and diagnosis such as cancer diagnosis employ the reader in detecting a set of markers related to the disease, for instance ovarian cancer.

L14 ANSWER 192 OF 394 CA COPYRIGHT 2007 ACS on STN
AN 128:44352 CA
TI Multicenter study using standardized protocols and reagents for evaluation of reproducibility of **PCR**-based fingerprinting of Acinetobacter spp.
AU Grundmann, H. J.; Towner, K. J.; Dijkshoorn, L.; Gerner-Smidt, P.; Maher, M.; Seifert, H.; Vaneechoutte, M.
CS Institute for Environmental Medicine and Hospital Hygiene, University of Freiburg, Freiburg, 79106, Germany
SO Journal of Clinical Microbiology (**1997**), 35(12), 3071-3077
AB Seven labs. in six European countries examd. 40 isolates belonging to the Acinetobacter calcoaceticus-Acinetobacter baumannii complex to investigate whether standardized protocols and quality-controlled reagents could produce reliable, discriminatory, and reproducible **PCR**-based fingerprinting results. Four **PCR** protocols with different primers (primers DAF4, ERIC-2, M13, and REP1 + REP2) were used. The epidemiol. conclusions reached by the participating labs. were substantially correct, with 96.4% of the total isolate grouping allocations agreeing with the consensus view. All labs. identified the main epidemiol. clusters, and each lab. also identified two non-outbreak-related isolates. There were no significant differences between the isolate grouping results obtained by the different protocols and with the different primers. Visual comparison indicated that the standardized protocols and reagents yielded reproducible fingerprint patterns, but with some **variations** in particular band **intensities**. Minor variations in fingerprint profiles were detected, but computer-assisted anal. of **PCR** fingerprints obtained on agarose gels demonstrated that 88.3 to 91.6% (depending on the source of DNA) of the patterns clustered correctly, while 96.4 to 98.9% of the patterns clustered correctly following automated high-resoln. laser fluorescence anal. Correlation of the patterns for isogenic isolates ranged from 83.3 to 86.6% but was slightly better (mean correlation, 87.1%) for centrally prepd. DNA exts. than for DNA exts. prepd. by individual labs. (mean correlation, 84.7%).

It was concluded that independently produced **PCR** fingerprint patterns can be obtained reproducibly reproducibly for Acinetobacter spp. at the practical level if (i) quality-controlled reagents, (ii) standardized extn. of DNA, and (iii) standardized amplification conditions are used.

L14 ANSWER 211 OF 394 CA COPYRIGHT 2007 ACS on STN
AN 126:284877 CA
TI Simplified calibration of instrument response function for Raman spectrometers based on luminescent intensity standards
AU Ray, Kenneth G.; McCreery, Richard L.
CS Dep. of Chem., Ohio State Univ., Columbus, OH, 43210, USA
SO Applied Spectroscopy (**1997**), 51(1), 108-116
AB Published Raman **spectra** are rarely **cor.** for **variations** in spectrometer sensitivity across the Raman spectrum, which leads to often severe distortion of relative peak intensities that impede calibration transfer and library searching. A method was developed that uses the known luminescence of stds. which fluoresce in response to laser irradn. Since the stds. are obsd. with the same sampling geometry as the Raman sample of interest, their spectra are subject to the same instrumental response function. After 1-time calibration of the stds.' fluorescence output against a known W source, the unknown Raman spectrum may be cor. for instrumental response by a simple formula. In practice, the user need only run the std. under the same conditions as the Raman sample, then apply a short GRAMS **algorithm**. The approach is demonstrated for Coumarin 540a and Kopp 2412 glass stds., with 514.5- and 785-nm laser light, resp. Once the cor. spectrum is in hand, the abs. Raman cross section of a given Raman feature may be detd. by comparison to known scatterers such as benzene.

L14 ANSWER 262 OF 394 CA COPYRIGHT 2007 ACS on STN
AN 122:179499 CA
TI Comparative analysis of human DNA **variations** by **fluorescence**-based sequencing of **PCR** products
AU Kwok, Pui-Yan; Carlson, Christopher; Yager, Thomas D.; Ankener, Wendy; Nickerson, Deborah A.
CS Department Molecular Biotechnology, University Washington, Seattle, WA, 98195, USA
SO Genomics (**1994**), 23(1), 138-44
AB Automated, direct cycle sequencing of purified double-stranded **PCR** products using Taq polymerase and fluorescently labeled dideoxynucleotide terminators provides a robust and highly reproducible method for identifying DNA sequence variations in sequence-tagged sites. The authors describe a simple and sensitive strategy that reliably detects the presence of DNA variations when sequencing traces from several different individuals are compared. The authors also demonstrate the use of this strategy to est. allele frequencies of single nucleotide substitutions in a population. Taken together, this approach provides an automated method for conducting rapid population studies of candidate gene regions that are in linkage or assocn. with a specific disease and for comparative evolutionary anal. of selected regions of the human genome.

L14 ANSWER 319 OF 394 CA COPYRIGHT 2007 ACS on STN

AN 112:69115 CA
TI Qualitative and quantitative image analysis of fluorescence from high performance thin-layer chromatography
AU Belchamber, R. M.; Brinkworth, S. J.; Read, H.; Roberts, J. D. M.
CS BP Res. Cent., Sunbury-on-Thames/Middlesex, TW16 7LN, UK
SO Recent Adv. Thin-Layer Chromatogr., [Proc. Chromatogr. Soc. Int. Symp.] (**1988**), Meeting Date 1987, 37-43. Editor(s): Dallas, F. A. A. Publisher: Plenum, New York, N. Y.
AB A solid state video camera and image processing system consisting of a frame store and computer have been used to analyze images of high-performance thin-layer chromatog. plates. The images can be obtained using transmission of reflectance mode illumination. Some spectral selectivity can be introduced by using appropriate Wratten type **filters**. Fluorescence compds. can be imaged by UV illumination. The images were enhanced using digital **filtering** techniques, contrast stretching, image **ratioing**, averaging and false color. This enhancement enables "finger-print" comparisons of complex mixts. to be easily made. Images were then **cor.** for **variation** in illumination **intensity**. The data were then treated by a chain contouring **algorithm**, which was used to detect spots, followed by the automatic detn. of their luminance intensity. The intensity of the spot could then be directly related to the concn. of the components of interest. Using this technique quant. detns. have been obtained for components in complex samples.

L14 ANSWER 359 OF 394 CA COPYRIGHT 2007 ACS on STN
AN 89:16028 CA
OREF 89:2429a,2432a
TI Development of a drift-correction procedure for a photoelectric spectrometer
AU Chapman, Gilbert B., II; Gordon, William A.
CS Lewis Res. Cent., NASA, Cleveland, OH, USA
SO Applied Spectroscopy (**1978**), 32(1), 46-53
AB A procedure for automatic correction for drifts in the radiometric sensitivity of each detector channel in a direct-reading emission spectrometer is described. Such drifts are customarily controlled by the regular analyses of stds., which provide corrections for changes in the excitational, **optical**, and electronic components of the instrument. This standardization procedure, however, corrects for the **optical** and electronic drifts, thus minimizing the time, effort, and cost of regularly processing stds. This method of radiometric drift correction uses a 1000-W tungsten-halogen ref. lamp to illuminate each detector through the same **optical** path as that traversed during sample anal. The responses of the detector channels to this ref. light are regularly compared with channel responses to the same light intensity at the time of anal. calibration in order to det. and correct for drift. The relative std. deviations of these drift corrections av. less than 1%. Except for placing the lamp in position, the procedure is fully automated and **compensates** for changes in **spectral intensity** due to **variations** in lamp current. A discussion of the implementation of the drift-correction system is included.

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STN INTERNATIONAL LOGOFF AT 19:31:12 ON 21 NOV 2007